

Inside the Hayward's Healthy Home



Lydia is a passionate advocate of healthy living. She has launched and positioned many health and wellness-related companies, products, technologies and organizations receiving more than 100 awards nationally and internationally. Her focus in the health sector is specifically on life sciences, aging and longevity. She is a partner and investor in several recognized national brands. She sits on the board of the Buck Institute for Research on Aging whose mission is to eliminate the threat of age-related disease for today's and future generations. It is the only independent research organization globally dedicated to extending the healthy years of life. Like the scientists at the Buck, Graham envisions it will be possible for people to enjoy life at 95 as much as at 25. To support Buck's mission, please visit [www.buckinstitute.org](http://www.buckinstitute.org).

## HEAL YOUR HOME (AND YOURSELF)

*"Diagnose" your home quickly with Hayward Score*

IN THE MARCH/APRIL ISSUE, I FEATURED "BUILDING HOMES THAT HEAL." THIS was a popular article, and writing it left me wanting to explore more information. Now, we continue that discussion. Funny, how when we begin a journey as if in synchronicity, the journey leads us to some interesting people and places. And so it was, I unexpectedly crossed paths with Bill and Adriana Hayward of Carmel/Monterey. They know firsthand about healing homes or rather the antithesis—homes that make us sick. Bill, a fourth generation lumberman and building scientist (former Industry Entrepreneur of the Year and the first in the U.S. to stock and sell Forest Stewardship Council-certified lumber) and his wife, Adriana, a clinical health psychologist moved into their dream home in Pebble Beach 11 years ago. It all seemed too good to be true until their new baby stopped growing (going from 90th percentile to 9th), and Bill and Adriana both began to get very sick—their symptoms manifesting differently. His as depression and debilitating exhaustion; hers as recurring sinus infections, foggy memory, and persistent congestion.



Hayward Score's headquarters in Carmel

Exhausting all options as to the source of their symptoms, they turned to their home and found pervasive mold existed throughout. They moved out, gutted it and are rebuilding. Today they are healthy but remain chemically sensitive. Additionally, four years ago, they completed their first Hayward Healthy Home in Carmel (you can hear more about that on their site under podcasts).

Although an unfortunate start, Bill and Adriana set upon a mission to spread awareness which led to the development of Hayward Score, a free easy-to-use online assessment tool that helps you “diagnose” your home. For those of us not skilled in construction or who are living in already-built dwellings or homes, or plan to remodel vs. building a house from scratch —this is a real find. (Surprisingly too, 40% of the 40,000 Americans who have taken the score, to date, are renters.)

Hayward Score tells you what issues in your home might need attention and provides detailed recommendations to solve them. You can improve your score as you fix certain things. Plus, there is a lot of great information on the site. After doing the assessment (which only takes about 10 minutes), they send your score immediately along with the recommendations. After scoring my home and speaking with Bill and Adriana, I came home and immediately began making the simple changes. Some are easy; others will take more time and money ranging in cost from under 1K-to-40K+ depending on how far you want to go (these you will need to implement as DIY projects or with your contractor).

Hayward Score was the brainchild of Bill Hayward and Carl Grimes, Healthy Home Director of Hayward Score and one of the pioneers in the healthy indoor air quality arena. Over two years, they set out to calibrate the human experience into a precise mathematical calibration and built their own set of patent-

pending algorithms. Their goal was to examine the home as a system in relation to its occupants and one that supports human health. “By combining our expertise in building science and health and your expertise on the conditions in your home and how you are feeling, we empower you to take effective steps that can transform the health of your home,” says Hayward. Since then, they have collected over 4.1 billion data points establishing correlations between factors in the home and human health—the only group to do this.

Our home and work environment lie at the very heart of our health. Consider these findings: a recent study of 2000 identical (monozygotic) twins revealed, ‘environment, not our genes, play the starring role in shaping the human immune system’ (Stanford University School of Medicine). By and large, we have become an “Indoor Generation” with 90% of our time spent indoors (EPA). According to the EPA, ‘most homes have more than one source contributing to indoor air pollution.’ Now, do I have your attention?

Dr. Adriana Hayward says, “Symptoms are often gradual and insidious. One doesn’t easily connect a water incident, or a move into an unhealthy home, with psychological or physical impacts. Diagnosis is further clouded since individuals present unique symptoms ranging from sinus infections to deep depression, foggy thinking, or even flu-like symptoms with tremendous fatigue, etc. The symptom list is long. Recovery becomes harder as the body burden increases with length and magnitude of exposure.”

Bill Hayward posits “Forty to-50 percent of illness comes from indoor exposures, and more than 25% of the U.S. healthcare spending is the result of the indoor environment. By empowering homeowners to understand and make their home more healthy, a lot of unnecessary suffering can be avoided, and our



*The first Hayward healthy home in Carmel*



*Fresh-air living outdoors*



*Bill and Adriana Hayward*

overall healthcare burden and costs as a society can be reduced. Too, we hope to create a push-pull in the building industry as consumers push contractors and architects to think and do things differently. Over time, this will effect deeper changes in the building industry and how we live in our homes.”

Hayward Score drills down and focuses on Hayward’s five fundamental principles for a healthy home: continuous fresh air; adequately sealed and insulated; cleanable surfaces; less toxic products and materials; and healthy home habits. The Hayward’s first Hayward Healthy Home in Carmel showcases these principles.

### CONTINUOUS FRESH AIR

Hayward says having a solid ventilation plan is number one. EPA reports indicate concentrations of pollutants are often two-to-five times higher than typical outdoor concentrations. This is because indoor air becomes so concentrated in a closed system. Assuming outside air conditions are optimal, Hayward recommends flushing your home with fresh air weekly. He calls this rebalancing the wild microbiome. This means opening all windows and doors (with screens) as well as closets, drawers, cabinets, and garages (as long as you don’t open the garage into your house) as those are harbingers of trapped air. Try to give your home active ventilation i.e., as much fresh air daily as you can by opening windows. Kitchens are one of the most toxic areas (induction cooking is preferable to gas, and wood in kitchens is not recommended). Pay

particular attention to bathrooms and kitchens always running fans during showers and cooking to provide ventilation with make-up air (that’s building lingo for air lost needs to be made-up or replenished with new air).

Your home’s location and climate also impact your indoor air quality. If you live within half-a-mile of a highway or busy city street, an agricultural area, restaurants, or coffee roasters—these outdoor pollutant sources can find their way into your home. If you want to check your current indoor air quality, Hayward mentioned several monitoring apps: Footbot, Aware, and Arvisual Pro. Consider air purifiers and ventilation system options. If you are willing to retrofit and commit some dollars, consider an HRV system such as the Zehnder Comfosystem HRV with MERV 13 filtration (for one room or whole house). An entire system for a 3,000 square foot house will run around 15K (inclusive of labor and materials). It’s especially critical to have good ventilation in the bedroom where we sleep. Since we spend 1/3 of our life there, we breathe most of our air in this room. During sleep, our bodies repair and rebuild. When assaulted by lousy air during the night, these processes can’t happen leading to a compromised immune system and more inflammation over time.

### PROPERLY SEALED AND INSULATED

How tightly your home is sealed directly impacts indoor air quality, noise, and moisture, the latter being the main impetus for mold. If your home isn’t appropriately sealed and windows remain closed, consider this—you’re breath-

*The Haywards, today, are a happy healthy family*





*The beautiful yard*



*Easy to clean surfaces in the kitchen*



*A view from the rear*

ing air coming in through cracks in the floor, ceiling and roofing materials, and adjoining crawl spaces infused with insulation particulate and dirt, to name a few. Doesn't sound appealing, does it? Another critical benefit to tight sealing is sound attenuation—our living space becomes peaceful and quiet.

Regarding moisture collection, familiar sources of leaks are ice machines and dishwashers. Check outdoor sprinklers to make sure they're not watering the side or base of your house. Ensure kitchen and bathroom fans are working correctly and not just recirculating bad air back into the home. Fireplaces are another caution area where good ventilation with make-up air is needed. Hayward does not recommend wood-burning or open gas fireplaces—inserts are better, he says, as it's a closed system.

### **CLEANABLE SURFACES**

The Zen practice of Cha Dao places 80% importance on cleaning. Perhaps these Zen masters would have been happy to have lived in and cleaned a Hayward Healthy Home. If we have a home that is tightly sealed—that cuts down on dust and grime. But the materials we choose are important too. He prefers hard floors to carpets. In kitchens, ceramic and linoleum to wood. Overall wood with its crevices can gather dust and grime. He recommends cleaning all surfaces and walls and ceilings regularly with a swifter. Choose a HEPA vacuum cleaner/central vacuum.

### **LESS TOXIC PRODUCTS AND MATERIALS**

This is an exhaustive topic and partly covered in "Building Homes That Heal," but Hayward adds NEVER use the following materials: OSB particle board, foam insulation, volatile paints, and wall-to-wall carpet. Here's a red flag—think how many people remodel to build-out or decorate a nursery right before a baby is born. Hayward says for four-to-five years after a remodel, indoor air quality is compromised, which is why it's so important to install an effective air ventilation system as part of a remodel. Flag any remodel to weigh-in on your air purification system.

### **HEALTHY HOME HABITS**

There are many small things we can do every day. We talked about flushing with fresh air, vacuuming with HEPA, cleaning all surfaces and running fans, etc. Too, think about the cleaning products (hopefully natural and without fragrance) you use and storing them properly. All chemical products should be stored outside the living area in addition to the more obvious ones like paint cans and other chemical products.

Change your home, and you change your life or at the very least, your health. The Haywards did. Find out how you can too and get your score at [www.haywardscore.com](http://www.haywardscore.com).